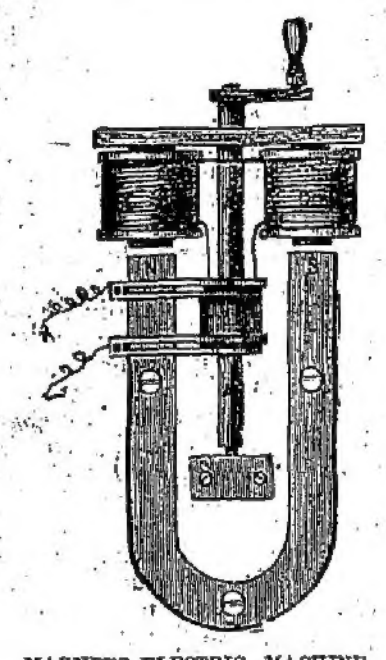
DEVOTED TO TEMPERANCE, SCIENCE, EDUCATION, AND AGRICULTURE.

VOLUME XV., No. 4. MONTREAL & NEW YORK, FEBRUARY 16, 1880. SEMI-MONTHLY, 30 CTS. per An., Post-Paid.

ELECTRIC SPEECH.

Who has not tried the experiment of gently tapping the end of a long log while another with his ear against the other end listens to the sound? or who has not heard the blow on a telegraph pole made by some one a long distance off, the sound being carried by the wires? or who has not made the dangerous experiment of putting his ear



MAGNETO-ELECTRIC MACHINE.

on the rails of a railway to hear the advancing train miles away, or which may be much nearer than was anticipated? or, who has not made a telephone by taking two tin cans such as oysters or vegetables are packed in, carefully removing both ends and tightly stretching a smooth piece of bladder at bottom of each and connecting centres of membranes by a piece of good string, catgut, or, best of all, copper wire? By the last contrivance conversation, in an ordinary tone can be carried on across a line two or three hundred feet long. These experiments all are evidences of the fact that the vibrations of sound can be quickly and forcibly conducted by many common substances such as wood and the metals.

Somewhat similar in its action, although very different in principle, is the telephone which, like many other triumphs of ingenuity, seems to have been floating about for many years in the minds of experimentors as a possibility soon to be realized, and several independent and original efforts were made in different parts of the world to transmit vocal and musical sounds over long stretches of wire by means of electricity. Before the year 1876 none of these records were practically successful, but during it the telephones of Bell, Gray, Edison and Dolbear were given to the world, each a distinct and ingenious solution of the problem which had engaged electricians—how sounds might be conveyed to long distances through the medium of an electric current.

The instrument of the four above named, which we select for explanation, will be that invented by Andrew Graham Bell, as the one perhaps most easily understood.

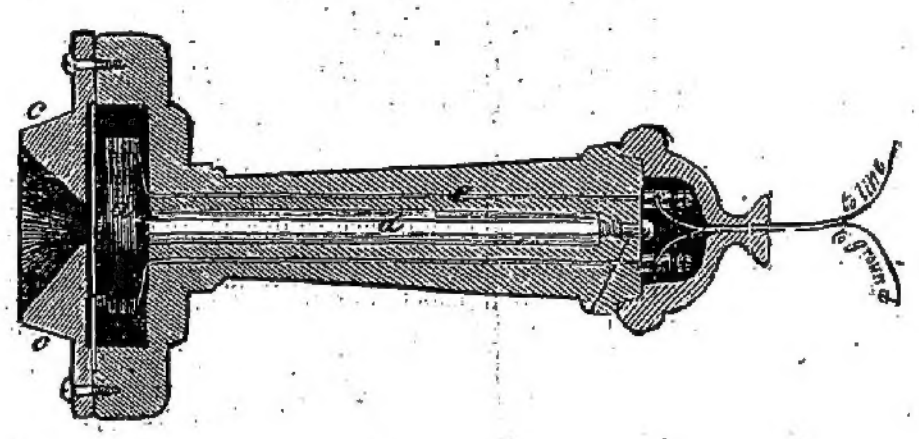
In the accompanying cut of Bell's telephone, *c* is the mouthpiece, at the bottom of which is *b*, a thin disc of soft iron, vibrating in correspondence with the voice; more agitated in loud talking than in whispering, and more by rapid utterance than slow.

The next point to be made clear is that a magnet varies in strength when a piece of iron in contact with it varies in closeness of connection. Take a common horseshoe magnet and suspend from it by their points as many sewing needles as it can hold up, then take a small piece of iron such as is usually sold with a magnet (called an armature), wrap it up in one fold of fine tissue paper, and place it on the side of the magnet. You will find that some of the needles will fall off. This is because the armature has magnetism excited within it at the expense of the magnet, which, therefore, has less power of supporting other objects. We shall see this more plainly still if we remove the tissue paper from the armature and slide it quietly down the magnet's side; a greater number of needles than before will fall off. In the construction of the telephone the little iron disc, *b*, vibrated by the voice, is attached to a strong steel magnet of cylindrical form, *d*; they are prevented from actually touching by a thin coating of varnish on the disc; as the disc moves back and forth in sympathy with the voice of a speaker, it is pressed toward and drawn away from the magnet, causing its strength to vary with every articulation and tone.

Referring again to the cut of the telephone, we find *a*, a coil of wire wound around the end of *d*, the magnet; as *d* varies in strength by the vibrations of *b*, the soft iron disc, it excites waves of electricity in *a*, the coil which is sympathetic with the spoken voice. These minute and delicate currents are carried to the other end of the line of communication through a wire as in ordinary telegraphy; this wire is joined to one end of joined to the other end of the coil, and is *a*, the coil, by *e*, while the bottom wire, *f*, is connected through the gas or waterpipes with the ground. The latter expedient is resorted to in all telegraphs, and makes it unnecessary to employ the two wires which were at first used on the lines; it is found that the earth is so good a conductor as to serve admirably instead of a second wire.

The currents constituting the message are received on an instrument exactly like the transmitting one; the waves of electricity as they pass around *d*, the magnet, affect its strength proportionately to their number power, and order; the disc attached is in consequence vibrated, and distinctly, though feebly, yields the words given to the companion instrument, which may be miles and miles away.

The wonder of this invention consists in its carrying recognizably the very accent and peculiarities of the tone of one's voice, while its tremors have been transformed from purely mechanical motion into magnetism,



SECTION OF BELL'S PORTABLE TELEPHONE.

thence into waves of electricity, and these back again into magnetism and the audible movement of a metallic disc. All this, too, without employing any force but that of the unaided voice. So slight, indeed, is the current of electricity, as it passes along the wire of communication, that the most delicate means adopted to detect it fail to do so. This has led to the opinion among some examiners of the telephone that it transmits the sound-waves as such, and that there is no intermediation whatever of electricity. The disproof of this error can be readily established by disconnecting the instrument with the ground wire; no message whatever can then be sent. Were the communication other than electrical this would not be the case. No second wire nor ground wire is required in using a simple sound-telephone, such as that described at the beginning of this article. Another evidence of the same import is that the speed of transmission is electrical, far transcending in rapidity the movement of sound-waves in metallic wires.

The next step to be taken in making the telephone's action intelligible is to know that when a magnet has wrapped about it a coil of fine wire, properly covered with silk, any variation in the magnet's strength excites an electric current in the surrounding wire. In the common medical battery where the turning a crank generates the shocks of electricity given to a patient, this can be very conveniently seen. In such an apparatus N S is a powerful steel magnet; before it revolve the two soft iron cores C and D; as they approach N S they become more and more magnetic and as they are drawn away their attracting force decreases. Parallel with these changes is the excitation of an electric current in the coils surrounding C and D, which rises and falls in strength exactly as the magnetism of the cores does.

SABBATH RAILWAY TRAVELLING.

BY PRESIDENT EDWARDS.

1. *It is a gross invasion of the rights of the people.*—The people have a right to the stillness and quiet of the Sabbath. The rumbling and screaming, the tumult and bustle, noise and confusion of the trains, as they run through a village, and often in the time of public worship, are gross and outrageous violations of that right.

2. *It is exceedingly injurious to the men who are employed in it.*—It tends to blunt their moral susceptibilities, to degrade them in their own eyes and in the eyes of their fellow-men, and to debase their whole character. It tends to lessen their conviction of moral responsibility, to render them reckless, and thus to increase the danger of all who travel under their care. It tends, also, if they have families, greatly to injure their children, and increase their exposure to evil, crime and infamy. Perhaps no men in the land need the rest of the Sabbath like the engine-drivers and other railway employes. Is there not a cry from all the railway men, "Give us our Sunday?"

3. *It tends to demoralize the public mind, to weaken the efficacy of law, and thus to endanger the purity and permanency of all our institutions;* while it keeps many away from the house of God, and thus lessens the efficacy of the means of grace. This no man, or body of men, for the sake of increasing the value of railway stocks and dividends, aiding and abetting others in breaking the Sabbath, or for any other secular purpose, have a moral right to do. And while they do it, it is wholly without right, in opposition to the moral law, and in violation of one of the great principles by which every man in the community is bound to be governed.

4. *The Sabbath day was not made for secular business nor was it given to men for that purpose.*—Of course it does not belong to them. If they take it, they take what is not theirs. That is not honest. Honesty is contentment with what belongs to a man. An honest man, who is acquainted with his rights, will not take what is not his. The Sabbath day for secular business is not his. So to take it for that purpose is not honest.

5. *Property gained by the open violation of divine laws is not apt to wear well.*—It does not seem to produce a good influence on the minds of the possessors. And if it goes down to their children, and they pursue a similar course, it seems to be followed with a curse downwards.

And should men wisely regard their own highest interests for this world, and the interests of their children, they would not consent to gain any more property, or retain it any longer than they could by obeying divine laws.—*British Workman.*

Temperance Department.

A TALK WITH OUR BOYS ABOUT TOBACCO.

When I was a lad, not so very long ago, a certain old lady used to say to me—"Be in at nine o'clock," "Never drink spirits," "Fear God," and many other wise words; but I took them like pills—needful, but nasty. Many a time have I shrugged my shoulders, and said—"I am tired of so many lectures." But she kept at it till I obeyed; and if I have done any good thing since, it can be traced to her words.

Now, lads, I am going to give you a lecture. It will be short, if not sweet. The wise ones among you will say—"Come, now, here is something from a man who was a boy himself not long since; let us hear what he has to say." Let me ask you before I go any farther—"Do you smoke? [illegible]." Well, never begin, and you will become a nobler man for abstaining. But perhaps you answer "Yes." Well, I am not going to scold; but I would like to have a quiet talk with you. Now tell me—was not this the beginning of it?

You saw men smoking; some of your companions smoked; and you thought it would make you look manly to smoke. You did not find it pleasant at first, and besides, you were obliged to hide the thing. But there was a spice of romance which made you struggle against the voice of conscience; and so it has gone on till you find yourself a regular smoker.

But does it seem a very manly thing to spend money and time in learning to draw smoke into our mouth and then puff it out? The boy does not require it; he is generally sick before he can take it; he spends money which he cannot afford; puts a bad smell into rooms; makes his clothes offensive; annoys ladies and sick people; makes himself the slave of a bad habit; poisons his constitution; prepares the way for drunkenness, and often ends by ruining himself and character for life. Does that strike you as very manly?

I am not going to argue whether smoking is bad for men or not. It is so, and I can prove it. But it is bad for you. All men, whether smokers or non-smokers, whether doctors, or ministers, or teachers, or parents, or friends, agree that smoking is bad for boys. Your body is tender and easily influenced. Tobacco is a poison. It makes you smaller in size, feebler in mind, and leads to other bad habits; you find yourself in danger of getting lazy—lolling about when you ought to be at work, and finding out that

> "satan finds some mischief still
> For idle hands to do."

It deranges your body, and takes away the healthy appetite you once had for plain substantial food. It creates a very unnatural thirst, which some day you may begin to quench with beer, or gin, or even brandy. Thus it may lead you to become a drunkard.

Evil habits, like evil men, go in company. A great American statesman once remarked, "I don't say that every smoker is a blackguard, but I will give you a white blackbird for every blackguard you can show me who isn't a smoker." If you want to be healthy and happy, able to live on plain food, and to need no "stimulants," give up smoking. Only consider what an expensive habit you have acquired. There is an inscription on the monument of a great man in Peel Park, Salford, which you should look at carefully: "My wealth consists not in the abundance of my possessions, but in the fewness of my wants."

There is a true saying that it is not what comes in, but what goes out which makes men rich. Those who have plenty now were generally poor enough one time, but they were careful—denied themselves many comforts to begin with, and by that means gained a little capital which has now become a great deal. Some men become rich by evil means, but you would not like to do so. Now the expensive habit of smoking will certainly keep you from getting on. And if you wish to make yourself a good and successful man, you will do well to begin by avoiding all unnecessary expense.

There is a very strange story which tells about certain people who were punished by being made to carry water out of a well in a sieve. Now that is like some people; they are at a well from which they must draw water, but they make holes in the dish till it becomes a sieve, and the water flows out as fast as it comes in. Every fresh need which you make, such as smoking, wearing jewellery, expensive clothes, going to theatres and concerts, is making so many more holes, and as fast as your salary comes in, it goes out again. This will do you much harm, and bring you into many difficulties. I knew a man who went into debt from which he found it hard to recover. He borrowed money, but it was no use—the more he got, the more he wanted; till his friends were tired, and gave him the cold shoulder. He fell into low spirits, became consumptive, and died in debt. He began his own ruin by learning to smoke. What a wretched thing it is for a man to be a trouble to his friends! It takes the man out of him and leaves him only a wreck.

So, my lads, if you are going to do work, count the cost before you begin. Determine to give up everything you can do without. Be content with necessaries; the less you care about dress and food and amusement the surer you are of true success. Remember Sir Isaac Newton, who, when asked to smoke, made the noble answer, "I will make no necessities to myself."

But perhaps you will say—"My father smokes, my teacher smokes, our minister smokes, and why should not I?" Well, I confess there seems some force in that, and I do not wonder that you should be influenced by them. But ask your father, teacher or minister if smoking is good for you, or if they would like to see you smoke! They will all say, "No; I am sorry I ever learned to smoke myself, and would be very glad to give it up, but I cannot."

If your minister or teacher lisps, do you think you ought to lisp? Certainly not, you answer; it is bad to lisp, even if the minister does. Smoking ought to be one of these things; and even if your minister should say, "There is no harm in a pipe," don't believe him till you have thought over the matter for yourself.

But you say, "It must be a very nice thing to smoke, or so many people would not do so. We have heard men tell what a luxury it is to sit down of an evening to a quiet pipe, how it soothes the brain, and how much better they feel after it." That is all very fine. There are other people who say they cannot go to sleep without their "night cap," meaning so much strong drink. They have used themselves to it. Only think of that. Now, it is the same with those who indulge themselves in smoking. The smoker puts his body into an unnatural state. When he is tired, he finds that rest will not come by resting; so to get rest at once he takes what will make him more restless and out of sorts next day. All that sounds very queer, but it is quite true. The man who never smokes becomes less tired, and can read and speak and write of an evening far better than if he smoked.

No doubt there is a certain kind of coarse pleasure in smoking, but "Is it good for one? and are there not far purer pleasures?" It is with smoking as with all kinds of stimulants—they are pleasant, but dangerous. They spur up a man for a short time, but they leave him weak and useless, beside wearing out the wheels of his nature. High-pressure men like high-pressure boilers, are unsafe. Fast men, like fast trains are in danger of jumping off the rails. When a man talks next time about his quiet pipe of an evening, ask him why he cannot, like every toiling, hard-worked mother, have a quiet evening without his pipe.

There is something else yet. Have you ever *noticed* how selfish a man is with his pipe? When it is in his mouth he cannot speak. When in a room he will indulge in it, although he knows there are some present who will be annoyed. On our railways, even though smoking apartments are provided, the man who wants his pipe generally takes it out anywhere and begins to *smoke*; if any one objects, he scowls or insults him. He cares only for himself.

What a pitiable sight! To the already numerous trials of railway travelling, he has made for himself that of being in discomfort for want of a pipe; and if he removes his own discomfort by smoking, he adds to his selfishness by making other people uncomfortable. What a position to be in! Truly the way of transgressors is hard.

If you wish to become a successful missionary to others, you must say to people, "My hands are clean. I am an abstainer from drink and tobacco and all kinds of extravagance." Begin your life, then, by setting before you as an aim—the doing of good. Many lads begin by thinking how to make money for its own sake, or for the selfish pleasures it will buy them. Now money grubs are the curse of our times. The love of money is the root of all evil. We want some brave lads who will give up the things of this life for the sake of others. Having a right aim, then set about to accomplish it. Resolve to give up smoking at once. Become a total abstainer, and you will be stronger in body, clearer in brain, and braver in purpose.—*Band of Hope Review.*

SIR WILFRID LAWSON ON COMPENSATION FOR PUBLICANS.

Perhaps they may get compensation when the thing comes to be settled, and I sometimes look forward to the pleasing sight of a retired licensed victualler. I fancy I see him sitting in a garden in his old age, with his little grandchildren playing around him. One says "Grandfather, what used you to do in former days?" He would say, "I was one of the grand army of licensed victuallers; there were 140,000 of us." She would ask, "What were you fighting about?" And he would reply, "Ah, if you had read Mr. Buxton the great brewer's book, you would have seen that we were carrying on the war of hell against heaven. We fought vigorously; great honor was paid to us; princes and peers and members of Parliament used to attend our banquets; great monuments were set up in our honor—workhouses and gaols and lunatic asylums—and we did such a quantity of business that in one year we disabled 350,000 people, and handed them over to the police to take charge of them. For there was a great army of police, who waited on our movements and attended our manœuvres. The Legislature was in our favor, laws were passed to promote the welfare of this great army, and nobody had any fault to find with us except Sir Wilfrid Lawson, who condemned us; but nobody paid any attention to him, for he was a bad character, except the Good Templars, who were distinctly mad." And then the little child would ask, "How did it end?" And he would say, "Oh, the Good Templars did not do us any harm. The nation got tired of us at *last*, but we were held in such honor and had done such good service we were entitled to compensation, and I got a handsome pension, and here I sit in my own garden, under my own vine and fig tree, the very type and embodiment of "Peace with honor."

NO CHILD'S PLAY.

"He's a nice fellow—it's a pity he drinks." The phrase is not without significance, even in our own country; but it means much more in England than it does with us. There is an influential tone in American life which makes drinking disgraceful to a degree which is not true in England; and while there is, unfortunately, quite enough intemperance in the United States, it is confined almost always to certain classes. It does not touch our clergy, for example; it does touch the English clergy. A tippling divine in America would be looked upon with horror, and would not be tolerated; in England a tippling divine would not be especially a subject of pity and object of reproach except to professed teetotalers, and he would be such even to them only in a mild degree unless he were a downright drunkard. The reforming Briton who has made up his mind to deal with the drink-scourge finds that his work is no child's play. Not only is there measurably lacking that moral influence which is so precious as a supporting power to the reformer, but the evil he combats is so universal that he seems to be at war with every sort of man. It requires all that British perseverance and obstinacy we so heartily admire when it is used in a good cause to fight a vice which literally pervades all classes. At the conclusion of one of John B. Gough's lectures in London lately a clergyman of the Church of England was found dead drunk under one of the benches. A "belted earl," one whose ancestral line stretches back to the Plantagenets, has recently been the talk of all London for his drunken caprices, now ordering special trains at various railways, none of which he uses: again, as colonel marching his regiment to church, reeling at every step, only to leave his men at the church-door to repair to a neighboring pot-house, where he was found tossing sovereigns with grooms and stable-boys in drunken jollity. My wife's little pink-ribboned Devonshire maid, with eyes like diamonds and cheeks like the rose, seeing her mistress provided her with neither beer nor beer-money, said frankly, "Well, but what am I to drink, ma'am, at my dinner?" With this universal idea everywhere prevalent that water is not a fit drink by itself; with the imperial revenue an immense gainer by the liquor-swilling, and therefore (it is to be presumed) not anxious to take the teetotalers' view of the question; with millionnaires in the brewing and banking business who through the drink-traffic have realized "the potentiality of growing rich beyond the dreams of avarice;" with "drinking your health, Your Honor," and "a trifle for beer" thoroughly ingrained as customs in the social fabric of the land; but, above all, with the well-defined appetite of all classes and ages of people, even children, for strong beer,—the reformers have had a veritable stone wall of China to pierce before they could make any headway in their toilsome march of progress.—*Lippincott's Magazine.*

DRUNKARD'S CRAMP.—I have had men come to me over and over again and say, "Doctor, I have such distressing sensations all about my heart, and at times I have painful cramps all over. What can it be?" And knowing well the over-fast lives they led, I have answered bluntly but quietly—"Chronic alcoholic blood-poisoning. If more stimulant than the body can 'consume' or 'work off'—take whatever verb suits your belief—is imbibed, the over-plus affects the quality of the blood—*i.e.*, poisons it. Well then, although the heart is an organ which supplies blood to the whole body, it also partakes of what it gives; it supplies itself, and if then the muscular walls of this vital organ be nourished with inferior blood, can you wonder that it grieves, and that you feel strange and painful sensations in and around it? And as to the cramps, they proceed from the nerves supplied to the different muscles under their command. They are merely complaining very loudly, that it is impossible to do their duty properly on the inferior blood supplied them." Cramp is, I believe, usually caused by a deficiency in the supply of blood, but I have seen many marked and most painful cases of what I might term "drunkard's cramp," in tall muscular, full-blooded men. But oh! if this cramp should attack the heart and *angina pectoris* should occur without a moment's warning, with its fearful suffocating agony of pain, and its terrible sense of impending death, how the patient is to be pitied!—*Cassell's Magazine.*

A SUSPICIOUS LOOKING ANGEL.—Dominie H. was one of the oldtimes circuit riders, whose rough exterior had somewhat non-society ways often obscured his real goodness of heart. One day he was caught in a shower in Illinois, and, going to a rude cabin near by, he knocked at the door. A sharp looking old dame answered his summons. He asked for shelter. "I don't know you," she replied, suspiciously. "Remember the Scriptures," said the dominie. "'Be not forgetful to entertain strangers for thereby some have entertained angels unawares.'" "You needn't say that," quickly returned the other; "no angel would come down here with a big quid of tobacco in his mouth!" She shut the door in his face, leaving the good man to the mercy of the rain and his own reflections.—*St. Louis Advocate.*

DR. RICHARDSON gave it as his opinion, some time ago, that "were England converted to temperance, the vitality of the nation would be increased one-third in value; or, in other words, nearly 227,000 lives would be saved to us every year." This is a startling statement; but, after careful investigation, Dr. Kerr thinks it is much nearer the truth than many were supposed to believe. His own calculations give 200,000 as the number of deaths resulting from drinking, of which 128,000 may be traced to drunkenness and the rest to more or less moderate uses of alcohol.—*League Journal.*

EX-PROVOST LYLE, Greenock, has offered to the Greenock Town Council to erect an ornamental fountain in the centre of the principal public square in that town at a cost of about £500.

Agricultural Department.

RAPID TREE PLANTING IN KANSAS.

Professor Sargent, Director of the Arboretum at Harvard University, sends an extract from a letter written by Mr. Robert Douglas, the noted forest-tree grower, of Waukegan, Illinois. Mr. Douglas has recently completed a plantation of trees of the new hardy Catalpa (*Catalpa speciosa*), for one of the railways of Eastern Kansas, and his method of planting, the result of years of practice and experience, will be of service to other prairie tree-planters, or indeed to any one elsewhere planting seedling forest trees on a large scale. He says:—

"I wish you could have seen those raw men after we had worked them a few days. They boasted about planting 300 trees per man when they worked there last spring. When I told them that, after two days, I would make them average 1,500 trees per man, you should have seen the the look they gave me. But they did it the second day, and kept it up to the end. The trees were as well planted as they possibly could be, the roots being carefully spread out by the fingers, and every tree planted firmly. Every one of those eighteen or twenty-four men, averaging ten hours per day, planted two and a half trees for every minute of that time. As this mode of planting is my own, arrived at after some study and experience, and reduced to the very fewest motions that can be used in planting a tree, or, rather, a plantation of trees, I trust that a description of the operation may be of interest. We call this the 'three-motion system' of planting. The land is marked off four by four feet, with a corn marker. The men are in 'gangs' of three each, two with spades and the other with 100 trees tied up neatly in a parcel with a willow. The spaders stand facing each other, taking each a row, the tree holder standing between them. The spader makes a downward stroke with the back of the spade facing outwards, and then takes out a spadeful of earth. This leaves a straight side on the back of the hole, against which No. 3 places the tree; the digger then replaces the spadeful of earth, having made just three motions of the spade. The tree holder takes a tree from his bundle, and with a quick motion, which is hard to describe, but easy to learn, places the tree in the hole in such a manner as to spread out the roots perfectly. In this way he tends two men, putting in the trees just as the spader raises the earth. As the spader steps forward to the next check made by the marker, he brings down the heel of his left foot close to the just planted tree, and this leaves it firmly tightened in the soil and ready to grow."—*American Agriculturist.*

SETTING AN ORCHARD.

I ask one favor of the nurserymen, that is to have the roots all dug out as long as convenient, and with as little mutilation as possible—better have a crooked tree, a bad top or no top at all, than to have bad roots. Handle carefully—do not let the roots dry either before setting out or after. See that your orchard land is dry, either naturally or by drainage. If sandy or gravelly, and too dry, it will require the more mulching—the more crops of buckwheat, clover or weeds ploughed in. Leached ashes, or the lees of unleached ashes on sandy land is a good thing. We in the west recommend the distance about twenty-five feet apart, the rows in the square form. The hexagon form is some advantage, but the disadvantage in ploughing and drawing the crop is greater. If the ground is very rich, as with much of our prairie soil, dig deep enough to mix the subsoil with the surface soil. Subsoil ploughing on such soil is best. Set the trees in moist, compact soil, not too muddy, not too dry. Remember the roots must have both water and air. A good mulching of stringy manure, straw, hay, or anything to prevent the sun from drying the ground that the tree is set in, ought to be applied when the trees are set. Place the dirt up slightly to keep the mice and borers out, and it serves to keep the rabbits and sun off also. Plough the orchard, and plant with corn. Do not sow it with grain or grass. The trees should grow in spring and early summer, so does the grain and grass; but corn grows later in summer, and checks the growth of the trees at the time when we want them checked, and to harden the new growth ready for winter. I am so much in favor of cultivating the orchard that I am ready to say, don't stop ploughing it every spring and early in summer. But we may let the corn-planting stop when the orchard is too large to raise a crop in, or when the soil is too poor for the growth of the trees. Then manure, or or plough in clover or buckwheat.—*By Suel Foster, in Examiner.*

A CHAPTER ON LEGS.

"A horse has four legs" is the stereotyped beginning of the schoolboy's composition on the horse; and in this the schoolboy manifests a large degree of intelligence. No part of the horse is of greater importance than the leg; and the experienced horseman will begin his examination, preliminary to a purchase, just where the schoolboy commences his composition. He wants to be sure that the horse has four good sound legs before he buys him, for he knows that in nine times out of ten, here is where a horse first fails. The turf horse that is always troubled with "a leg," is a nuisance. Curbs, spavins, ringbones, weakened or sprained tendons, "bucked" knees, and stiffened joints are some of the troubles that affect the legs of the horse, and greatly impair his usefulness.

The indications of a good leg are firmness, hardness, and smoothness to touch, showing an entire absence of adipose tissue; large, well defined joints, entirely free from abnormal appendages; firm, but elastic, cords; a short pastern, short from knee and hock to pastern joint. The shape of the bone should be broad and flat, and the legs should stand squarely and firmly under the horse, the toes turning neither in nor out. The bone should be of good size just below the knee, and flat; but large-sized cannon-bones, with strong, clean back sinews and suspensory ligament, are of great importance. "Curby hocks," "cow hocks," "bowed legs," "calf knees," and "over on the knees," are indications that are always unfavorable.

All these points are to be examined mainly when the horse is not in motion; and when fully satisfied in these particulars, it is very essential to see that, having four good legs, the horse has the ability to use them properly; that he steps with a firm, free, and elastic tread; that the legs and feet do not get in the way of each other when he is in motion, but move freely, without interference, and yet without any paddling or straddling motion. Stiffness of the joints will be most readily detected by causing the horse to step backwards, and by seeing him in motion when first taken from the stall, before he has been warmed up.—*National Live-Stock Journal, Chicago.*

BOTTS.

BY J. H. WILSON, LONDON, ONT., PRESIDENT ONTARIO VETERINARY COLLEGE.

Botts are the larva of various species of the gadfly that pester and annoy the horse in the summer and autumn months by depositing their eggs on the long hairs underneath the jaws, on the breast, shoulders and fore limbs of the animal, thus placing the eggs in a proper position when matured to either drop into the animal's food, or be taken by the mouth into the stomach by the horse biting at his sides or limbs when the fly is about to deposit the egg. It is in this way that the fly or bott is perserved from one season to another, the stomach of the horse being provided by nature to protect them during the winter months. After hatching they are supplied with two sharp fangs or hooks, by which they attach themselves securely to the various coats of the stomach, more particularly in the right or pyloric region. The duodenum also is not unfrequently the seat of the bott. In this position they are nourished and fed by the various secretions of the stomach and fluid portions of the food until they become matured, which generally occurs in the months of May and June, when they suddenly let go their hold and pass off with the feces, where they again undergo another change, and once more assume the parent fly. Great diversity of opinion exists as to whether botts do any harm or not. Some even go as far as to assert that they assist materially in digestion by their stimulating action on the secreting portion of the stomach. But in my opinion they frequently do much harm and mischief, that is, when they accumulate in large numbers and partially fill or block up the pyloric orifice, thereby preventing the food from passing out of the stomach into the duodenum.

Symptoms—Botts are seldom recognized by any distinct signs, except that the animal is weak and easily fatigued. His coat is long and staring. The bowels are sometimes loose, and at other times constipated, but the surest sign of their presence is when they are found in the manure, which generally happens in the spring season. The reason attributed for their appearance at this particular time is that the time has arrived for them to quit their winter quarters and to be once more transformed from a grub to a fly.

Treatment—The irritation caused by the presence of botts is not easily distinguished from other forms of indigestion; sometimes we have flatulency and at other times attacks of spasmodic colic. There is one thing certain, that we cannot kill the botts in the horse's stomach, as they will resist the strongest acids and alkalies, the most potent narcotics and mineral poisons, but if their presence should be suspected it would be well to feed the animal on soft, nutritious diet; also, a mild purgative, given occasionally, might do much in removing the mucous that is generally present in the bowels when the animal is troubled with parasites of any order whatever.

GLAZED POTS FOR PLANTS.—Glazed pots are condemned by most writers. The majority of these writers are greenhouse men, or those with but little experience with growing plants in the dry air of our parlors and living-rooms; and, in watering, those in glazed pots would naturally receive the same supply as those in common porous pots along-side. The evaporation from the porous pots would take place much more rapidly than from the glazed, and the one would be comparatively dry while the other would be still wet. The next watering repeats this process, and the result is plainly seen. The plant in the glazed pot perishes at once, or drags out a sickly, miserable existence. Glazed pots can be used with good results in the parlor or living-room. If the drainage is good, so that the surplus water can pass off, there are many plants that will grow well in them. To this may be added that many people are very irregular in watering-house plants. They forget to attend to it until the dry and parched appearance of the earth admonishes them of their neglect. Of course, the plants in the unglazed pots suffer worst under this treatment, for the earth gets dry from top to bottom; while in the glazed pot the great bulk of the earth, being protected from rapid evaporation, may remain comparatively moist, though the top is dry.—*Journal of Chemistry.*

THE PRODUCTION OF A SINGLE BEAN.—The history of a single bean, accidentally planted in a garden at Southbridge, Mass., is traced by a newspaper correspondent, who figured out its produce of three years. The bean was planted in a rich, loamy soil, and when gathered in the autumn its yield, as counted, "was 1,515 perfectly developed beans from a single stalk. Now, if a single bean produces 1,515 beans, and each bean produces 1,515 more, the sum total of the second year's product would be 2,295,225, equal to 1,195 pounds, 507 quarts, or 2,390 army rations, equal to $18\frac{5}{8}$ bushels. This would be the product of the second year. Now, if we plant this product and the yield is the same, we have a product of 5,268,058,800,625 beans, equal to 1,371,890 tons, or 42,871,572 bushels, or 548,756,068 soldiers' rations. The third planting would give the steamship "Great Eastern" 92 full freights." Few beans, however, start so well as this one did.

FRANCE HAS agricultural schools for girls. One of the chief is near Rouen, which is said to have been begun with a capital of one franc by a sister of charity and two little discharged prisoner girls, and to be now worth $160,000. This establishment has 300 girls from 6 to 18. The farm, entirely cultivated by them, is over 400 acres in extent. Twenty-five sisters form the staff of teachers. More than one medal of the French Agricultural Society has been awarded to this establishment at Darnetel, and the pupils are in great demand all over Normandy on account of their skill. They go out as stewards, gardeners, farm managers, dairy women, and laundresses. Each girl has on leaving an outfit and a small sum of money, earned in spare hours. If they want a home they can always return to Darnetel, which they are taught to regard as home.—*Methodist.*

DOMESTIC.

TO LARD POULTRY.

Poultry may be either cooked with a little butter to baste it, or it may be larded or "barded"—although the latter are the modes of preparing adopted by all good European cooks. To many Americans the flavor of bacon is objectionable, yet even where it is approved, larding is often supposed to be so difficult as to require a professed cook to do it; but it is actually so simply that any lady wishing to indulge in dainty dishes will take the small trouble of learning it, to teach her inexperienced cook. Two larding needles are required—to be procured at any good house-furnishing store—one large-sized for veal, beef *a la mode*, &c.; the other, small, for poultry, cutlets, and sweetbreads. In larding poultry, hold the breast over a clear fire for a minute, or dip it in boiling water to make the flesh firm. Cut some strips of firm, fat bacon, two inches long, and the eighth of an inch wide, and make four parallel marks on the breast, put one of these strips of bacon fat, called lardoons, into the split end of the small needle, securely, and insert it in the first mark, bringing it out at the second, leaving an equal length of fat protruding at each end; insert these lardoons at intervals of half an inch or less down the two lines first commenced, and then do the same with the two others.

All white-flesh birds are improved by larding, as is veal and sweetbread. Yet small ones, quails, for instance, may have a barde—*i. e.*, a slice of bacon fat—tied round them. This may also be done with fowls, or veal, where bacon is liked and larding inconvenient.

Game requires nothing but good butter to baste it. Any sort of stuffing is ruinous to the flavor, except in the case of pigeons, where a little chopped parsley may be mixed with butter, and placed inside.

Wild duck, if fishy, and the flavor is disliked, should be scalded for a few minutes in salt and water before roasting. If the flavor is very strong the duck may be skinned, as the oil in the skin is the objectionable part. After skinning, spread with butter, and thickly dredge with flour before putting in a very quick oven.—*Catherine Owen, in Scribner's Monthly.*

AN ENGLISH writer describes the making of "sea-weeds doyleys" as follows: "I put the pieces of sea-weed into a large basin of water, so that they spread out in full beauty. I then slipped a piece of net on paper underneath and lifted it gradually out of the water. I placed the whole between blotting-paper between weights and left it for a day or two. When quite dry I removed the paper underneath the net, cut the net into a circular shape, and added an edge of very fine lace with a needle and thread. No gum is required. The sea-weed looks well on pink or blue net."

OLD CORKS may be put to some quaint ornamental uses. Cork baskets are made by breaking up corks, threading the pieces on wire, and winding them round boxes and strawberry baskets. To make rustic cork boxes, cut old wine corks into thin rounds, and each round into six pieces. Thread them, and plait eight for the outside and six for the inside, and when varnished this resembles leather. An ingenious walking-stick may be made by stringing corks on a stiff wire and carving them with a sharp knife.

MOUNTAIN DEW PUDDING.—Three crackers rolled fine, a pint of milk, yolks of two eggs, bake half an hour. Beat the whites of the eggs to a stiff froth, add one cup of sugar and a pinch of salt. Flavor with lemon, pour over the pudding, and set in the oven till delicately brown.

BIRD'S-NEST PUDDING.—Peel and core as many apples as will stand in a dish, and fill the holes with sugar. Make a custard of a quart of milk, four eggs, and a quarter of a pound of sugar. Pour it over the apples, grate a nutmeg over the top, and bake one hour.

A THORNY PATH.

(By Hesba Stretton, author of "Jessica's First Prayer," Etc.)

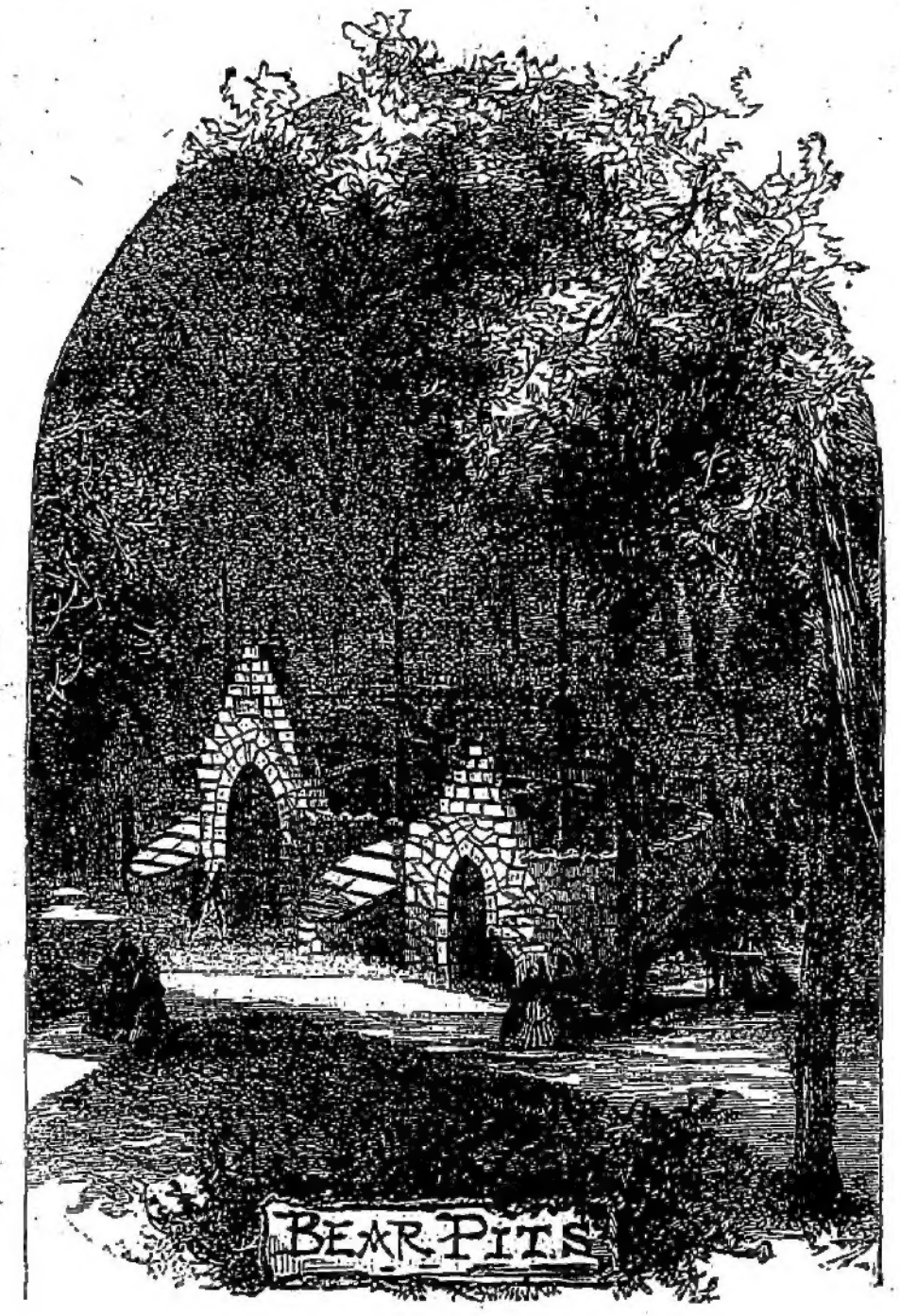
CHAPTER VIII.—THE CARES OF THIS LIFE.

On the evening of old Lister's funeral Mrs. Clack sat alone and idle at her fireside. She had no heart to set to work on the mending and refurbishing the cast-off clothes about her. It was a real grief of mind to her that the only man she had ever had to do with should have been buried in a pauper's grave; but she could not prudently afford to give him any other burial. Her hoard of savings was small, and her stock had been seriously damaged by the rough mode of disinfecting them which had been gone through as soon as the worn-out body of the blind old man had been carried away to the dead-house. Poor Don was down with the fever, and had sent off immediately by the doctor to the fever hospital. No one but herself and Dot had been left to follow the old man's coffin, and little Dot had enjoyed the trip to the cemetery. She was gone to play with some neighbor's children now, and Mrs. Clack sat tearful and downhearted by her solitary fire.

What made it seem so solitary? For many a long year she had lived alone, and no face met her eyes when she looked round her little room, and no voice had fallen on her ear. She had chosen to live alone, priding herself upon keeping aloof from the fellow-creatures among whom her lot had been cast. She was one who kept herself to herself, was her boast. What good came of gossiping and neighboring? As long as she could take care of herself she would be beholden to nobody, and nobody had any claim upon her. So for many years she had lived alone, and people had died, and children been born into the world, and sorrow and sickness had befallen her neighbors living thickly around her, and joy and gladness had shone upon their homes for a brief season, and she had neither wept with them nor rejoiced with them. Why should she feel solitary and sad now?

It was Don that had done it. She could remember how the lonely, homeless boy, when he was a little lad of ten, had met her one day, bending and staggering under an unusually heavy load, and how he had insisted upon hoisting it on his own little shoulders, and tottering beneath it till he reached her door. From that day to this he had made himself so useful to her that it was but a small return to let him sleep at night on the old mattress in the room below. He had seldom taken a piece of bread from her, but had picked up his own living she scarcely knew how; only turning in for shelter each night, and serving her as if he could not do enough to repay her. What had she done for Don? What trouble had she taken for him? She, who had been well-taught in her youth, who could read and write better than nineteen out of every twenty folks like them, what had she taught Don? For nearly four years he had attached himself to her, and he knew nothing yet of God, nothing of any life beyond this; nothing of Jesus Christ and his death upon the cross. He was as dark and ignorant as when she first knew him.

Suppose Don died in the fever hospital! He might as well have lived in a heathen land, for all he knew about death and what comes after death. The heathen knew more than he did, for they have Gods and prayed to them, though they were false. But Don had no knowledge of any God. Why had she never taught him?



The tears stole slowly down Mrs. Clack's cheeks. She knew all about God and His Son Jesus Christ. All the wondrous story of God's love to the world had been familiar to her in her girlhood; she could have answered any question about the life of Jesus Christ. Somewhere she had a Bible that had been given to her as a reward for her Scriptural knowledge. But she had lost all thought of such things; she had forgotten them altogether. The many cares of this world and the hard struggle for a livelihood had choked the good seed sown in her childhood. It was many a long year now since she had given a single thought to her Father in Heaven, or to her Saviour, who had lived on earth a life of toil and care like her own.

Then as she sat there, sad and lonely, she seemed in her own mind almost to see Jesus Christ, in all His goodness and holiness, passing His time, not in solitude like herself, selfishly holding him self aloof from the rough, ignorant people about Him, but dwelling like a neighbor in the midst of them; walking with them in the fields, sitting with them in the house; rowing with them in their boats; feasting with them; going to their funerals; being so pressed by them that He could scarcely make His way along the streets and lanes. Did Jesus never hear the neighbors gossiping? Did nobody run to tell Him when a baby was born in the same street, or when two young folks were going to be married? And did He turn a deaf ear to all this common news, and pass by as if it had nothing to do with Him?

Her own heart answered that the Lord Jesus Christ the Son of God, must have led a very different life from hers, or He could never have been the Saviour of men. Why! she had saved no one, not even saved them a few minutes' trouble. Jesus had born their sins, sorrows and sicknesses; but she had done nothing until Don had brought old Lister and little Dot to her door, and her heart, thank God, had not been hard enough to turn them away to starve. But that was Don's doing; and, oh, she was glad she had taken them in, and borne with them, and learned to love them a little. She fell down on her knees, and hid her tearful face in her hands, praying to God to pardon her long forgetfulness of His love, and to help her to live no longer to herself. It was a long time before she rose from her knees. She was not praying so much as remembering what Jesus Christ had done for her; His love and sorrow that had been so sinfully neglected by her all these years. What He required of her to do was to go out amongst her fellow creatures, and follow in His steps. It would be a great trial, but she must do it.

When Don came back she would teach him diligently all she knew. Poor old Lister had *died in gloom and darkness* when she ought to have been ready with a blessed light to shine upon his way to the grave. Dying like a dog. Yes, it would be dying like a dog if there was no Father in heaven, and no home there to go to.

It would be worse than that, for a dog dies with no such thought of such a thing, with no longing wish to go home to God, and feel His love. But to die lying with that darkness all about one, and think that there might have been hope, and joy, and a blessed entrance into another life, and dear friends' faces smiling a welcome, and Jesus Christ Himself to receive the soul—to think all this might have been, yet was not, would make a man's death a thousand times worse than a dog's.

And this life! What a poor, miserable, wretched thing that was—at any rate, for poor folks—if this world were all. Toiling and striving and scraping and going without comforts, almost without necessaries, seldom eating *quite* enough, scarcely ever warm in winter, or cool in summer, wearing rags, and walking almost barefoot—if this were all, better a thousands times be a dog than a man or a woman, with a heart to feel for the little children growing up in misery, and for the old people passing out of it in darkness. How was it she could have gone on so long without a thought of God and the Heaven He dwelt in, and the love He felt for the world, when He sent His only Son to save it? What a foolish, selfish, sinful woman she had been all these years!

She was so deep in thought that she scarcely heard a low and timid knock at the outer door at the foot of the staircase, but when

a second tap came, she opened her window, and looked down into the dark court, where the figure of a girl stood below her.

"Please, Mrs. Clack," said a sorrowful voice, "I'm Peggy Watson, and mother's struck with the fever, and father says p'raps you'd be so good as to lend us the loan of the mattress the blind fiddler died on, so as to leave mother by herself. We've only one bed, and she throws herself about so."

"I'll come down myself and see her, my dear," answered Mrs. Clack.

Here was a call come at once, as if direct from Heaven, to prove if she would really follow Christ, who came to give His life for His brethren She had always passed those people with downcast eyes and averted face, as being lower and more ignorant than herself, but now she made haste to go down quickly to their help.

It was no light task she had undertaken. Peggy was a rough, untaught girl of twelve, and the house, which was the same sort of dwelling as her own, was bare and comfortless. But Mrs. Clack removed her neighbor into her own more comfortable home, and nursed her there until the fever was passed, and she was pronounced out of danger.

"You've saved my life, Mrs. Clack," said Mrs. Watson, faintly, one day; "but if it weren't for the poor children I'd as lief have gone. There's nought worth livin' for as I can see, and nothin' worth dying' for; but anyhow it's over when one's in the graveyard."

"Hush, hush!" she answered. There's Jesus Christ to live for—'ay, and to die for. I've thought so many a time whilst you've been ill."

Her voice trembled a little as she said it, but she called up all her courage, and the woman's sunken eyes turned to her with an eager gaze.

"I've heard a little of Him," she said, "but I scarcely know anything. There's my brother wrote me good letter once about Him you spoke of, but I couldn't make much of it. You're a scholar, and maybe you'd write to Jem, and tell him I've been down with fever, and p'raps he'd have me over for a bit when I'm well enough to go. I'm almost dying for a breath o' country air."

"I'll write," said Mrs. Clack, cheerfully. She felt shy yet at speaking openly to any one of the change that had passed over her own soul, and it seemed easier to her to to do something for her neighbor. She wrote the letter, and a speedy answer came, enclosing a few shillings, to pay the sick woman's fare to Reading, and inviting Mrs. Clack to accompany her. Mrs. Watson was yet so weak that she begged of her to go with her, and take a holiday for a few days.

"Little Dot can stay with our children," she urged; "Peggy's that fond of her nobody could tell, and you'd be all the better for a rest and a mouthful of fresh air. Oh! Mrs. Clack, you've been so good to me, you never could leave me to go alone. And you and my good brother 'ud be such friends! He goes preachin' on Sundays, though he's a poor man, and never got much learnin' when he was a lad. Maybe he'll show me whether there's anything worth livin' for."

"But who'll take care of Don if he comes back while I'm away?" asked Mrs. Clack.

"Peggy will take care of Don," she answered, "if he gets out of hospital while we're away, but we shan't be more than a week, and if ever I'm strong enough to do some charing, I'll pay you back your expenses. Only say you'll come."

It would be a great treat to her, a wonderful treat to see the country again after so many years of London streets and London smoke. Dot was quite at home with the children and Peggy, and Don might not be back for a fortnight. So a few days after the invitation, Mrs. Clack and her neighbor, white-faced and worn to a shadow, stood side by side on the platform of Paddington Station, looking in bewilderment and dismay at the confusion around them. Mrs. Clack's heart failed her, and a nervous trembling seized upon her, which made every object swim and dance before her eyes, when a pleasant voice speaking to her gave her a faint hope.

"Where is it you want to go to?" asked the guard.

"Oh, to Reading, please," she said timidly, looking up into the face of a tall man, who was smiling down upon her.

"Now, don't put yourself about," he said kindly, "I'm the guard of this train, and I'll put you into a carriage, and see you out again at the right place. You're not used to travelling? Never mind, I'll take as much care of you as if you were as precious as china. And you are more precious than china," he added, smiling again at her flurried face.

"You are very good, sir," she answered tremulously, "and, oh, if we could but come back with you. We're going into country beyond Reading for a week, me and my neighbor, and we havn't been on a railway for years. If we could only come by your train."

"Well," he said, whenever you're on this line you ask at the station for Abbott, they all know me, and if I'm anywhere about I'll see after you. I shall be coming back to London, Mondays, Wednesdays and Fridays, next week. I'll write it down for you, and the time of the train, and you look out for me at Reading if you return either of those days. You'll remember me?"

"Ay! I shall remember you sir, and God bless you!" said Mrs. Clack.

CHAPTER IX.—A TROUBLED CONSCIENCE.

Hagar remained in the hospital until she began to feel as if it was her home, so long she lay there in the same bed, seeing the same faces from day to day. That there was no other home for her made her cling more to this hospital ward, and dread the day when she would be well enough to be dismissed. But in spite of her dread, and of her homelessness, the time came when she was pronounced cured; and though she was still unfit to face the cold world again, alone and feeble, it was necessary for her to make way for another yet more helpless than herself. If there was no other place to go to, the work-house was always open to her.

Hagar scarcely cared what became of her; the bitter despair and weariness of life that possessed her when she abandoned her father and her little girl was not yet cast out of her soul. Remorse was blended with her despair now, for day and night the picture of her blind old father and the helpless child, as she had seen them last, was present to her mind. It was this which made her recovery so slow; outwardly she was silent and submissive, always obeying her nurse and the doctor, but inwardly she was fretting and chafing herself with tormenting thoughts.

At length the day came when she must go; her own tattered clothing was brought to her, and made to look as clean and respectable as it could be, and she dressed herself in it silently, hating the very sight and touch of these rags, which seemed a badge of her utter poverty and friendlessness. What could there be before her but to wander about the streets, hiding her head anywhere she could for a shelter, and dying in some hole at last, uncared for and unknown? A fitting end for one like her, she said to herself.

"Abbott left a message for you yesterday," said the nurse to her, when she was ready to go. "If you've nowhere else you want to go to, we're to send you in a cab to the house where he lives, and he'll be at home to-night. His cousin, who is a dressmaker, lives at the same place, and will be there to take you in."

Hagar lifted up her drooping head, and the almost sullen gloom of her face brightened a little. Abbott's messages to her had been the only link between her and the outer world, and had brought the only gleam of hope to her dark mind. She had seen him once, and his face had been the face of a friend. He had told her, too, that the same coffin held his mother and her baby, and it seemed as if this formed some kind of kin between them.

(To be continued.)

BEAR PITS.

Take my hand young reader and come with me on a visit to the bears in the great Zoological Gardens in London, England. The "Zoo" is what it is called there. Now we are inside the gates, and step into the refreshment room for something to eat. Hi! what is this? Why here is an immense elephant with a penny in his trunk, bargaining for a bun. He is too big to get in himself, and he puts his trunk through the door and lays the money on the counter and the waiter gives him the bun. What a little mouthful for such a big animal!

Now he has gone and we will follow him to his own house, where he stays at home all day Sundays. This was thought to be an enormous house when it was built for him, but he grew so much that it had to be raised and built higher.

Here we are. Now give the keeper a penny for each of us, and we will have a ride on the elephant's back. How high up it seems to be, and how he jolts. I don't care much for riding on elephant's backs, do you? Now he is back home again, and it is our steed's time to bathe. He seems to like it too. See how he dashes into the water which comes up to his breast. He then fills his trunk full of water and showers it over him.

We have done with the elephant now, and visit the aquarium. How many thousands of fish there are, and everything that lives in water, including seals, and amongst them "Toby," whose wonderful doings the MESSENGER described some time ago.

What a roar! Don't be frightened. It is only the lion, who is securely caged. We take a glance at him and then at tigers, kangaroos, hyenas, jackals, birds of all kinds, dogs, cats, and after that come over to the bear pit, which is built on the incline of a hill. What funny animals they are in their house built of stone, with paved floor and high poles up which they climb, there catching in their enormous mouths the morsels of bun thrown to them by the visitors.

Would it not be terrible if that big brown bear should take it into his head to leap out over the wall and get in amongst the thousands of people here; but he couldn't do that as the walls are too far away.

Why? what a long walk we have had! We have seen all these things without leaving our seats. Perhaps some other day we will finish our journey in these wonderful gardens called the "Zoo."

RICHES profit not in the day of wrath; but righteousness delivereth from death.—Prov. xi: 4.

The Family Circle.

TRANSVERSE AND PARALLEL.

My will, dear Lord, from thine doth run
  Too oft a different way.
'Tis hard to say, "Thy will be done,"
  In every darkened day!
    My heart grows still
    To see thy will
  Turn all life's gold to gray.

My will is set to gather flowers,
  Thine blights them in my hand;
Mine reaches for life's sunny hours,
  Thine leads through shadow land;
    And all my days
    Go in my ways
  I cannot understand.

Yet more and more this truth doth shine
  From failure and from loss,
The will that runs transverse to thine
  Doth thereby make its cross;
    Thine upright will
    Cuts straight and still
  Through pride, and dream, and dross.

But if in parallel to thine
  My will doth meekly run,
All things in heaven and earth are mine,
  My will is crossed by none.
    Thou art in me,
    And I in thee—
  Thy will—and mine—are done.

—*Illustrated Christian Weekly.*

JAMES JOHNSON'S OPPORTUNITY.

It was All Saints' Day, and the services of the little Episcopal Church in Springdale had been unusually inspiring. It was one of these beautiful days that sometimes usher in the first of November; the church was dressed with flowers; white and crimson and golden chrysanthemums adorned the altar, making it almost as bright as the painted glass in the windows.

It was evident by the manner in which the rector read the service that the spirit of the festival had deeply entered into him, and his voice trembled with a subdued emotion as he announced his text:

"Be not slothful, but followers of them who through faith and patience do inherit the promises."

He spoke of the loveliness of the day, the quiet ease and security in which they had adorned their church with flowers, and assembled there to commemorate the sufferings of the holy saints and martyrs who were now before the throne of God. To us in our peaceful homes and churches this memory of these saints and martyrs, he said, is a lovely poem; but, ah, it was no poem to them. There was no picture, no palms, no glory then; all was bitter, hard, stern reality. He painted before them in vivid, plain words some of the incidents of the primitive persecutions. He described the scene which a great French painter has lately embodied in a picture—the gardens of Nero when the young, gay and fair of old Rome promenaded and chatted amid walks which were lighted up by living human beings, gagged and bound and slowly consuming in cruel fires.

"My brethren," he said, "every one of these men and women who suffered this horrible death might have avoided it. One short sentence, very easy to speak; one little action, very easy to perform, would have redeemed each one of them. It was only to say, 'I renounce Christ,'—it was only to cast a few grains of incense on the altar of Jupiter, and life with its blessings was theirs! Nay, oftentimes, riches, promotion, office were offered to them at this very simple price.

"This was what it was to confess Christ then. Thousands of noble-minded men, of women delicately reared, of young persons and children, chose rather to burn in those lingering fires, to be thrown to the wild beasts, to pass through tortures that we can scarcely bear to read about rather than to speak those few words, or perform that simple action. They would not renounce their Saviour. It was because they were willing thus to suffer that we now are free to confess Christ without suffering. When we commemorate the 'noble army of martyrs' in the service of the Te Deum, let us not forget what we owe to them; that we are enjoying to-day those religious gifts which they purchased for us with agony and blood.

"It is a solemn question," he said, "what we have given up or borne or endured for Christ. He says whosoever doth not bear his cross and come after Me cannot be My disciple. That was not said merely of people in those days. He says whosoever, in all time, in all countries, doth not bear his cross and come after me cannot be My disciple. There is a cross for every man and woman among us; and if we will not take up that cross and patiently bear it we are not and never can be Christians. The cross is not now in confessing Christ—all Christian society professes in some way to believe in Him. Nobody calls on us now to renounce Christ. Nobody wants us to burn incense to Jupiter. In a general way there is credit and honor in a Christian profession. Where then is the cross? My friends," he said solemnly, "God knows where it is; wherever your obedience to Christ's teaching requires of you some painful sacrifice, there is your cross. There are places where to do a Christian duty requires a sacrifice of money or of reputation or of friends, and he who in those crises of life shrinks from those hard duties denies Christ, as really as those who offered sacrifices to idols. Remember, dear friends, the words of our Lord. He says: 'He that will come after Me let him take up his cross.' Our Lord went before us in the path of pain and self-denial. In every hard place we can see His footsteps in advance marking the path. He bore a cross heavier than we can ever bear, and if we look to Him He will give us strength to bear ours."

The service was over, and as the sweet voices grew fainter and more faint in the distance the audience turned one to another and said, "Isn't it beautiful?" "Haven't we had a lovely time?" "What a glorious sermon!" "What a splended rector we have!" "Did you ever hear such a sermon?"

But there was one hearer, a plain, unimaginative man, who sat after the services in deep thought. He did not join in the general enthusiasm; he said nothing to any one, but stood by himself with the air of one who is revolving some perplexity. As nearly all the audience had passed out he joined the rector coming from the vestry.

"Ah, Mr. Johnson, how do you do?" said the rector extending his hand cordially; "I hope you have enjoyed the day."

"Well, sir, it has been a good day, doubtless; but—" he paused and looked troubled.

"But what?" said the rector.

"Why, sir, how can a man in these days know he is a Christian, when there is no opportunity to try us?"

"But you know," said the rector. "I told you 'there's a cross for every one.'"

"Well yes, sir, but what little ones! A man is rather thought the better of for going to church and for being a communicant. We don't have to sacrifice anything for Christ—not to speak of. We have to keep our temper, not speak quick when provoked, put our share into the offertory, do a little good here and there as we get a chance; but if we had to give everything up, all our property, see our wives and children suffer, be willing to be burned alive or thrown to the lions—how many of us would stand that? How many Christians would there be in Springdale if that was the trial?"

"Well, my friend; the martyrs that did this have left the testimony that it was not by their own strength. It was Christ with them and in them giving them strength to do and bear."

"It must have been," said Johnson, thoughtfully; "I don't see anything in myself that could do it, but perhaps if the cross was laid on me I should have strength given."

"Yes, if you sought it; and whether the cross is great or little, it is only by seeking that help that we can bear it."

"Well, they had a great opportunity," said Johnson, thoughtfully, "such as isn't given to us."

"The duty of the hour is our opportunity," said the rector; "and he that is faithful in the least will be faithful also in much;" and here they parted at the gate of a white house with green blinds, embowered in lilac bushes, which Johnson called home.

He stopped for a moment and looked thoughtfully up. It was one of those neat, complete comfortable New England houses that are the outgrowth of an exact, careful, respectable mode of living; industry and frugality embodying itself in the form of home comfort. The deep front door-yard had both its shade trees and flower borders. The late blossoming chrysanthemums still adorned the one and the maples, though fast losing their crimson and gold foliage, still were beautiful shade trees. On one side an ample garden, which all summer long had yielded fruits and vegetables in their season, stood cleared up and waiting for its winter coating of snow.

James Johnson stopped a moment and looked thoughtfully over the whole. It was his home, bought with years of patient and honest toil, the refuge of his advancing age, the shelter of his children, the joy of his wife; and as he thought, a passage came into his mind—"They took joyfully the spoiling of their goods." "Ah," he thought, "could I do it? Could I give up my little home, my garden, the home of my wife and children? I don't know how they did it! Yes, it must have been they were helped; it would take something stronger and higher than I am to make me able to do it. May God help me to be faithful in the least, and then perhaps He will help me to be faithful in much."

It will be seen by this that our friend James Johnson was not one of the stony-ground hearers of the Word, nor among those like the hard-trodden wayside, where every chattering fowl of the air lights down and sweeps off the precious seed; that he was among those who receive the seed into the silent shelter of a good and honest heart.

He was by nature exact, conscientious, scrupulously truthful in his words and careful in his dealings, and therefore what had evaporated in emotive talk and expressions of admiration in many others on that day, had turned inward in him in silent self-examination. He had, to use a significant common expression, laid it to heart.

"Wife," said James Johnson to his household partner, "the day after to-morrow I am going to Merton. I've had a letter from Pierson at last, and he wants to meet me at Merton to settle up accounts. I'm glad of it; it's quite time we had paid everybody up. I don't like to keep all these hard-working fellows out of their money; they want it to fix things up for winter, and I believe in paying up prompt; so I am glad Pierson is going to settle up."

"So am I," said his wife, "for to say the truth, I never could trust that man much. He's smart and driving and capable, and keeps a good many irons in the fire; but somehow, I can't say why, I never trusted him. I didn't like your going into business with him much."

Here we must stop to explain that James Johnson had a year or two before become a partner in a provision store kept by this George Pierson in Boston. Johnson was the rural partner; it was his part of the business to travel around in that rich farming country where he was situated and secure and forward to Boston all manner of farm and garden produce. He was known through all the country for a careful, truthful, exact man, and every householder and housewife felt sure that in trusting their butter, eggs and vegetables to him they were putting them into the hands of a careful, conscientious person, who would be sure to render them a just equivalent. In fact, everybody that knew him considered his entering into such a firm as a fortunate thing, ensuring them that they should receive a fair reward for their labor. He would make sure their pay; nobody doubted him.

And for a while everything in the conduct of business had justified their expectations. Produce had been well cared for, punctually forwarded, and the returns had been no less punctual and satisfactory. But of late the remittances from the partner in Boston had been irregular, and Johnson had written letter after letter, both to the partner who delayed to pay and to the creditors who needed the money. He was now going, as he hoped, to have a satisfactory adjustment and bring back money to pay off all arrearages. Merton was a midway stopping-place between Springdale and Boston, where a good deal of forwarding business was done, and it was at Merton therefore, that he hoped for this opportunity of full adjustment.

He arrived an hour before the Boston train was due, and secured a room where they might have full and undisputed opportunity to go over their accounts. His accounts and papers having been put in readiness for a clear settlement, he went down and stood on the platform to await the arrival of the train.

At last it came in, and at last out of it came Pierson, a florid, portly young man, with an alert and jocular manner, a quick step, restless eye and facile tongue.

"Here you are, old fellow," he said, "On time as usual."

"Yes," said Johnson, "and I've got a room engaged close by here where we can be by ourselves, and all my accounts ready, so as not to keep you long."

"Oh yes; don't I know you? Everything on the square and up to time. Well, peg on and fire away," he said, as they walked rapidly up the street.

"I hope the business is going well," said Johnson, by way of conversation as they walked along.

"Oh well, the times are beastly, perfectly beastly; but we'll do pretty well. I'll take care of you anyhow."

"People are pressing hard for their money," began Johnson.

"Oh, of course. I know that people always want their money; that's the old tune. Well, let a fellow get some lunch. We won't talk shop till that's over."

And Pierson called for his lunch and his lager-beer, and seated himself, full spread and jolly, and ate and laughed and joked, and seemed in such abounding spirits that Johnson said to himself; "Well, he's found a way to settle all up; he will make all square."

After lunch he hurried his companion to the room where the accounts were all spread out upon a table.

"There," he said, seating himself eagerly, "here are three months' accounts for provisions forwarded, and here are all these letters. Here's Matthews' for butter, here's the Widow Smith's for eggs and garden vegetables, and here's—"

"Oh well, Johnson," said his partner pushing the books from him, "all that's neither here nor there; that ain't what I came for. The fact is, our firm is going to smash up, and I've just come up to let you know that you may put things well out of sight and save yourself."

Johnson, as we have said, was not an imaginative man—he was slow in receiving ideas, slow in comprehending. He sat back in his chair and regarded his partner with an air of dazed, stupid amazement.

"Smashed up!" he gasped; "what do you mean?"

"Why, smashed up—wound up—or whatever else you call it. We're going to fail, in short. The fact is, we are running at a loss, and shall go the devil if we don't stop. The times are beastly, as I told you. Nothing pays, and we've just got to wind up and save what we have made."

"Oh, I see," said Johnson, "pay up and settle. How here I owe for hay, and for wheat and flour and butter and all; it's run up terribly. I hope you'll let me have money to settle that; here are the figures."

"Not much!" said Pierson, putting his thumb into his button-holes, and sitting back contentedly; "why, you spooney don't you see—we're going to fail!"

"But I got these provisions; they trusted me. I've given our notes for them."

"Well, that's just what I came to tell you: just make over your house and place to your wife and they can't touch it. That's what I've done; they can't touch a thing of mine."

"Why that would be dishonest; it would be no better than stealing; you can't mean that, I'm sure you can't!"

"Pooh, your green—haven't cut your eye teeth. It is what is done constantly; members of the church, deacons, any fellow that has sense looks out to save himself and his family when there is a smash like this coming."

"How dare you tempt me so?" said Johnson, rising indignantly. "How will you answer for it in the judgment day? No; if you leave these debts on me, I shall pay them as far as I can, if I have to sell my house and use every cent I've laid up."

"Well, if you're a mind to be such a fool I can't help it," said Pierson, rising also. "I gave you a fair chance to save yourself."

"A fair chance to steal from hard working farmers and widows," said Johnson, in gathering wrath. "That's what it is. Sam

Pierson you are a villain! God will judge you!"

"Pooh, pooh! Don't get excited! You'll think better of it. At any rate, I must go back to Boston on the next train. Now, old fellow, don't think I'm out of temper with you. You're green, like your country produce; that's all. Ha, ha! You think it over and you'll come round Bye-bye." And with a jocular, patronizing air, Pierson rolled himself out of the apartment leaving our friend alone.

"God help me! What shall I do?" he said. "My poor wife and the girls! It'll come hard on them. O Lord, hold me up! Don't let me listen to him. Help me to do the right thing."

It was no light trial to a man passed middle life, who needed rest and felt that health and strength were going on the down-hillside, to be called suddenly to face the question of giving up his whole worldly support for right-doing. He was by nature cautious and desponding, and it seemed the most hopeless ruin. He laid his head down on the table and groaned aloud.

Was he alone? Let us trust not. We have high authority for thinking that God's little ones are never left alone in their hour of struggle; the angel that always beholdeth the face of their Father, is with them.

> The spirit world is not remote;
> Thine eye is sealed, thy sense is shut.

Could we see into that ever present world we might see bending over this plain, poor man, a face fair as a star, solemnly strong and sweet. Gradually the tempest of his heart lulled and beautiful words passed over his soul like music: "Casting all your care on Him, for He careth for you." "Blessed is the man that endureth temptation, for when he is tried he shall receive a crown of life." And then the solemn services of All Saints' Day returned to him.

"Yes," he said, "here is my cross. Here is where I am tempted to renounce Christ. I must not burn incense on heathen altars, whoever else does it. I see it all. I must give up all to be a good Christian."

Again the voice said within him: "There is no man that hath left houses and lands for my sake and the Gospel's, but he shall receive manifold more in this life and in the world to come life everlasting."

"It's the same thing," he said to himself. "I am tempted just as they were. I must give all to be a Christian, as they did. After all, I am not called to give up life itself, to bear tortures as they did; but here is an opportunity to give up a great deal, and the Lord will give me strength to do it—oh yes, He will!"

A great steady calmness fell over his soul, the rest of a great conflict past. "Bless God, I didn't yield," he said over and over to himself. "He will keep me from falling. He is able."

We should do injustice to our friend Johnson should we represent that the trial here ceased. The cross is never anything but a cross, and he who has taken it up, with whatever exaltation, will find it a bitter burden. It was no light affliction to bear the news to his wife and daughters and witness their trouble. His wife and daughters with one voice supported him in his resolution, and began immediately to shape their plans for the new paths of self-denial and enterprise in which they must tread.

The small sum which Johnson had accumulated in the savings band was immediately drawn out and appropriated to the payment of those of his customers who were most dependent upon their little gains from dairy and garden; but for the larger debts there was no resource but the sale of the house, and this was a matter requiring time.

The winter was a sad one. It is not possible at once to lose business and property without an accession of daily trials and fatigues. There were days of fatigue and nights of care, and not always could they see the bright side of the trial. The apostle has told us that no trial for the present seemeth joyous, but grievous; and another writer has said: "It is not when the storm is raging on the beach that we go out to look for treasure; but when the waves are gone down and the shore is still we find pearls and precious gems that have been cast ashore in the tempest." There are such pearls, but we must wait till the tempest is over to find them.

Suffice it to say, the house was sold and every debt honestly paid, and the next year found the family dependent on summer boarders, the mother and daughter doing their own domestic labor and the father in a situation of much work and small salary.

During all those struggling months in his battle with sleepless nights and weary days, Johnson had one comfort. "Thank God," he said, "I didn't yield. He gave me an opportunity, and I might have lost it; but, thank God, I didn't! He helped me to give up all and I did. That is something nobody can take from me."

And the daily trials came to mother and daughters in bodily fatigue and unaccustomed cares. Though it was a trial to see Sam Pierson coming back to spend his summer, florid and easy, with his span of horses and his wife and daughters bedecked with fashionable ornaments, yet neither Johnson nor his family ever in heart took back their sacrifice or regretted what they had done. The consciousness of a heroic constancy in right is the "manifold more" than houses and lands which the Saviour gives to those who give up all for His sake and the Gospel's—that is, for the right and the true for which He laid down His own life.

And could we have seen again into the spirit life that lies along side of ours, we should have seen in that little household the faces of guardian angels bright with solemn joy, for angels think of things far otherwise than we, and while men are saying one to another. "Poor soul, what a loss! what a trial!" the angels say, "Blessed soul! what an opportunity! what a gain!"

Blessed is the man that endureth temptation!—*Harriet Beecher Stowe, in Good Company.*

JIMMY'S EXAMPLE.

Tim Jones had long cherished a strong dislike for Jimmy Langdon. After Jimmy's public acknowledgment of Christ, this dislike was greatly increased. He could scarcely have given a particular reason, if he had tried. The real secret was that the striking contrast between Jimmy's frank, outspoken, generous manner of life, and his own low cunning, hypocrisy and meanness, made him feel uneasy and ashamed of himself whenever they came together.

But Tim was not wholly unsusceptible. The prayers and counsels of a godly mother were not altogether lost upon him. Attending the same school, constantly receiving good for evil in many and unexpected ways, and obliged to respect the manly bearing of his young associate, he at last found himself thoroughly won over.

Meeting Joe Whitney, a special confidant of his, he made a clean breast of the whole matter. "Joe," said he, "I've never done the fair thing by Jimmy Langdon. I've misunderstood and mistreated him in every way, and yet he has always treated me respectfully and kindly. The other day, in playing baseball, he had every chance in the world to cheat me several times, and he knew it too, but he never took any unfair advantage of me. I couldn't say as much for myself, I confess. Yet, when he caught me at my tricks, once or twice, he only looked a little disappointed, that's all. And only a day or so ago, I overheard him talking with Pete Lathers. Pete said some sharp and hard things about me, and I must acknowledge they were about just. But what did Jimmy do but just turn all aside by speaking of the only good qualities that I could lay any kind of claim to. Now, I have to admit there's something genuine about such religion as that. And it must be a matter of religion, for you know Jimmy wasn't always like that. He used to be as excitable and hot-tempered as any of us once. No one was quicker to resent an injury. I tell you what it is, Joe, I've been thinking such fellows as we ought to be looking into this thing. I've got some sense of honor yet, anyhow, and I don't mean hereafter, that Jimmy shall have it all so one-sided—at least, as far as I am concerned."

Does any Christian boy, among my readers, sometimes get a bit discouraged in finding frequently the cold shoulder, and sometimes sneering and open persecution? Don't give up. Remember that Jesus, in all these particulars, suffered more that you ever have, or ever will. Be faithful, be consistent, and you will one day find, though perhaps not so soon as Jimmy, that your example has not been without its salutary and saving influence, and a greater influence than you have imagined.—*Child's Paper.*

SEEKING FRUIT.

A master comes to his garden. He turns over leaves of pear and plum trees, and he looks along the branches of the peach trees. "Trees look very healthy, don't they, sir?" says the gardener, in a satisfied way. Then they pass into the orchard. "Nice trees these, sir," observes the gardener,—"very choice sorts, golden pippin and russet." Then they turn to the hot-houses: "Vines and pines look very promising," says the gardener, smiling complacently. At last the master speaks out, half angrily, "What in the world is the use of healthy trees, and of choice sorts, and of promising plants? I don't want green leaves and fine young wood only—I want fruit. And if you can't get it, I must find somebody that can."

The Lord of the vineyard comes to us. He stands before us and looks underneath the leaves of our profession, searching for fruit. Good desires, good feelings, good endeavors all our praying, all our believing—everything else counts for nothing unless there be some fruit. This is what our Master requires and seeks.

Do you remember how the Lord Jesus took His disciples into the vineyard and told them of the vine? The words are worth thinking over solemnly, one by one. "Every branch in Me that beareth not fruit He taketh away." Every branch in Me. Surely it is enough to be in Him! This is much more than profession; and much more than orthodox belief; and much more than a moral life: In Christ. Yes, but it is not enough. Privilege and position do not deliver us from the need of any good results—they make the obligation. In such a vineyard; with such a husbandman; a branch of such a vine, what if there be no fruit? This: "Every branch in Me that beareth not fruit He taketh away; and every branch that beareth fruit He cleanseth it that it may bring forth more fruit. . . . Ye have not chosen Me, but I have chosen you, and ordained you, that ye should go and bring forth fruit." To Him, to us, to others, fruit is to be the end and evidence of our life.—*Rev. M. G. Pearse.*

BROTHER, WHAT IS YOUR HOPE?

BY CHARLES S. ROBINSON, D. D.

An interesting story has been related in one of our missionary periodicals concerning a faithful minister now laboring in the foreign field. While travelling once in India, he discovered in a retired spot by the wayside a man lying on the earth. Seen at a distance, he appeared to be asleep. He judged him to be one of those singular heathen devotees, so often in that land encountered, upon their painful pilgrimages, and supposed that, fatigued with his protracted journey, he had fallen on the ground for rest.

Coming up to him, however, he found that the man was really in a dying state, just breathing his last. Kneeling down by his side, and solicitous to give help or bring comfort to one in such mortal extremity, he put the question in the native language: "Brother, what is your hope for eternity?"

Faintly, but with an expression of delighted surprise, the man replied: "The blood of Jesus Christ, his Son, cleanseth us from all sin." His strength failed him with the mere repetition of these inspired words; and in a moment more, the soul of this unknown believer had passed out of human sight, and was in the presence of God. Subdued into unutterable emotion at thus suddenly confronting death, there in so secluded a retreat, the missionary gazed upon the lifeless body, silently wondering who this strange fellow-Christian might be. His eye caught a glimpse of a fragment of paper closely clasped in the dead man's hand. On examination, this proved to be a detached leaf of the Bengalee Testament. And on it were traced the words which that Hindoo convert had repeated with trustful reliance, as he floated out alone upon that shoreless sea of eternal existence which rolls all around the world.

There comes an hour to every individual, when that same impressive question must be answered with equal explicitness: "Brother, what is your hope for eternity?" There will be a day when each one of us will withdraw quietly from the dusty road of human travel, and seek some undisturbed spot in which to die. A score of wrong replies may be made then, when it will be too late for a man to make any other. That which the Bengalee believer made is the only safe one; and that has to be understood earlier.

It is a useless thing to assert with persistent vehemence that it matters little or nothing as to what a man believes provided he is only sincere. It makes a great deal of difference what a man believes. Faith decides character, and character fixes destiny. "As a man thinketh in his heart, so is he." Theory governs life, and life it is that opens the door of eternity.

Question Corner.—No. 4.

Answers to these questions should be sent in as soon as possible and addressed EDITOR NORTHERN MESSENGER. It is not necessary to write out the question, give merely the number of the question and the answer. In writing letters always give clearly the name of the place where you live and the initials of the province in which it is situated.

BIBLE QUESTIONS.

37. Where does Christ say "I will have mercy and not sacrifice," and where are the words found in the Old Testament?
38. Which of Christ's miracles were miracles of creation?
39. On whom did the office of High Priest fall after the death of Aaron?
40. Who was smitten with leprosy for having obtained money and goods under false pretences?
41. In whose reign and for what reason was the brazen serpent that Moses made destroyed?
42. Who in Bible times preaches from a pulpit?
43. When the Holy Land was divided among Israelites what portion did the Levites receive?
44. What two persons in the Old Testament fasted forty days?
45. What noted man was slain in a city of refuge, and what was the city?
46. What king feigned insanity in an enemy's country?
47. Who was Sisera, and when did he live?
48. What prophet was sent as a missionary to the Gentiles?

SCRIPTURE ENIGMA.

The letters in the answers to the following will, if rightly placed, form the name of a learned teacher:—

1. One of the encampments of the Israelites where there were wells of water.
2. A man who conspired against Abimelech, and was thrust out from the city where he had dwelt.

ANSWERS TO BIBLE QUESTIONS IN NO 2.

13. A brother offended, Prov. xviii. 19.
14. Prov. xviii. 24.
15. Seven years, 1 Kings vi. 38.
16. Four hundred and eighty years, 1 Kings vi. 1.
17. The confusion of tongues at the tower of Babel, Gen. xi. 8, 9.
18. "Trees used for food, Deut. xx. 19, 20.
19. By sea on floats, 1 Kings v. 9.
20. Fear God and keep his commandments, Eccl. xii. 13.
21. "Thou shalt love thy neighbor as thyself," James ii. 8.
22. Proverbs xvi. 32.
23. The Syrian army at Dothan, 2 Kings vi. 18.
24. A piece of brass, 2 Kings xviii. 4 the name was given by Hezekiah to the brazen serpent.

ANSWER TO ENIGMA.

"HOPE THOU IN GOD."—Psalm xlii. 11.

H-ebron—1 Sam. ii. 2-4.
O-thniel—Judges i. 11, 33.
P-adan-aram—Gen. xxviii. 5.
E-lisha—2 Kings iii. 11.

T-erah—Gen. xi. 31, 32.
H-azael—2 Kings viii. 15.
O-livet—2 Sam. xv. 30.
U-ri—Exodus xxxi. 1, 2.

I-sboheth—2 Sam. iv. 5, 6.
N-achons—2 Sam. vi. 6.

G-ibal—Josh. v. 12.
O-bed—Ruth iv. 17.
D-emetrius—Acts xix. 24, 26.

CORRECT ANSWERS RECEIVED.

To No. 2.—Willie Fairchild, 11; John Wainwright, 8; William Walsh, 7.

To No. 1.—Mason Liebhart, 12; Nellie Bridge, 11; Maggie Colhoun, 11 ac; Walter McClive, 11 ac; Lottie Baker, 11; Robert M. Grindley, 12 ac; Elbert T. Vardon, 10 ac; Martha Barnhill, 11 ac; Abigal Sutherland, 10 ac; Cora M. MacIntire, 11; Phœbe T. Ford, 12; Hannah Brown, 12 ac; C. W. W., ac.

SCHOLARS' NOTES.

(From the International Lessons for 1880, by Edwin W. Rice, as issued by American Sunday-School Union.)

LESSON VIII.

FEBRUARY 22.]

GIVING AND PRAYING.—Matt. 6 : 1-13.

[About A. D. 28.]

COMMIT TO MEMORY vs. 3-6.

1. Take heed that ye do not your alms before men, to be seen of them: otherwise ye have no reward of your Father which is in heaven.

2. Therefore when thou doest thine alms, do not sound a trumpet before thee, as the hypocrites do in the synagogues and in the streets, that they may have glory of men. Verily I say unto you, They have their reward.

3. But when thou doest alms, let not thy left hand know what thy right hand doeth:

4. That thine alms may be in secret: and thy Father which seeth in secret himself shall reward thee openly.

5. And when thou prayest, thou shalt not be as the hypocrites are: for they love to pray standing in the synagogues and in the corners of the streets, that they may be seen of men. Verily I say unto you, They have their reward.

6. But thou, when thou prayest, enter into thy closet, and when thou hast shut thy door, pray to thy Father which is in secret: and thy Father which seeth in secret shall reward thee openly.

7. But when ye pray, use not vain repetitions, as the heathen do: for they think they shall be heard for their much speaking.

8. Be not therefore like unto them: for your Father knoweth what things ye have need of, before ye ask him.

9. After this manner therefore pray ye: Our Father which art in heaven, Hallowed be thy name.

10. Thy kingdom come. Thy will be done in earth, as it is in heaven.

11. Give us this day our daily bread.

12. And forgive us our debts, as we forgive our debtors.

13. And lead us not into temptation, but deliver us from evil: For thine is the kingdom, and the power, and the glory, for ever. Amen.

GOLDEN TEXT.

Thy Father which seeth in secret shall reward thee openly.—Matt. 6 : 6.

CENTRAL TRUTH.

Acceptable service must come from the heart.

NOTES.—ALMS, in Christ's time, were of two kinds—(1) Of money for the poor of the place, received in a chest in the synagogue on the Sabbath; (2) of food or money for the poor in general, collected daily from house to house. Almsgiving had so much stress laid on it that it was commonly called by the general name of "righteousness." TRUMPET, or cornet, was an instrument made of a ram's horn, and used at the solemn festivals in the temple service, and by the ancient Hebrews for signals of various kinds. It was also used in the synagogue service at the close of the day of atonement. The reference to it in the lesson is figurative of the vain display made by Pharisees. They did not really blow a trumpet. SYNAGOGUES were buildings erected and dedicated to the worship of God—whenever possible, in the highest spot in or near the town or city to which they belonged. There the stated religious services of the Jews were held, both the daily and weekly. Synagogues probably had their origin in the meetings of the schools of the prophets in Samuel's time, although it is not until Ezra's time that we read anything definite of them (Ezra 8 : 15; Neh. 8 : 2) They were to Judaism what churches are to Christianity. CLOSET.—*This is called the "secret chambers" in ch. 24 : 26.* It was a kind of cellar or store-room. In most houses there was a room on the housetop specially use for prayer.

EXPLANATIONS.

LESSON TOPICS.—(I.) TRUE ALMSGIVING. (II.) TRUE PRAYER. (III.) THE MODEL PRAYER.

I. TRUE ALMSGIVIG. (1-4.) ALMS, in v. 1, should be "righteousness" *in general, of* which alms (v. 2) are only a part; TO BE SEEN, the motive—in order to be seen; REWARD (25 : 31-46); HYPOCRITES, originally meant actors in the theatre; here, religious pretenders; IN THE STREETS, when giving alms to beggars; THEY HAVE, the names of large givers were publicly announced in the synagogues; LET NOT THY LEFT HAND, a figure of speech to express modesty and simplicity in giving.

II. TRUE PRAYER. (5-8.) WHEN THOU PRAYEST, better, "when ye pray;" THOU SHALT NOT, "be not;" STANDING, a common posture in prayer (1 Sam. 1 : 26; Mark 11 : 25; Luke 18 : 11, 13). They are not blamed for the posture, but for the display; SYNAGOGUES . . CORNERS, the most public and frequented places. The Pharisees arranged to be just at such places when the hours for prayers arrived; SHUT THY DOOR, so as to be quite private, unseen, and unheard. Public prayer is not meant to be condemned, but the making of private prayer public, and especially the wrong motive in it; IS IN SECRET, unseen and unheard, yet is present everywhere; VAIN REPETITIONS, as if there were merit in the duration and the number of words of a prayer. This was expressly taught by some rabbins (see ch. 23 : 14).

III. THE MODEL PRAYER. (9-13.) AFTER THIS MANNER, "thus," for example; WHICH ART, who art; HALLOWED, kept holy sanctified, in thought and conduct; KINGDOM, reign, freely acknowledged government; WILL BE DONE, freely, voluntarily; IN EARTH AS . . IN HEAVEN, literally, "as in heaven, so also upon the earth." This may apply to all the three preceding petitions; DAILY BREAD, literally, "our bread of subsistance;" needful for our sustenance; not only "bread," but "food" in general; DEBTS, sins, trespasses; AS WE FORGIVE, "have forgiven; "as" means "in like kind," not degree; EVIL, *spiritual and physical, conflict with which is "temptation;"* FOR THINE . . . EVER (see Luke 11 : 2-4); this part of the prayer was perhaps added to the text at a later date.

LESSON IX.

FEBRUARY 29.]

OUR FATHER'S CARE.—Matt. 6 : 24-34.

[About A. D. 28].

COMMIT TO MEMORY vs. 31-34.

24. No man can serve two masters: for either he will hate the one, and love the other; or else he will hold to the one, and despise the other. Ye cannot serve God and mammon.

25. Therefore I say unto you, Take no thought for your life, what ye shall eat, or what ye shall drink; nor yet for your body, what ye shall put on. Is not the life more than meat, and the body than raiment?

26. Behold the fowls of the air: for they sow not, neither do they reap, nor gather into barns; yet your heavenly Father feedeth them. Are ye not much better than they?

27. Which of you by taking thought can add one cubit unto his stature?

28. And why take ye thought for raiment? *Consider the lilies of the field, how they grow;* they toil not, neither do they spin:

29. And yet I say unto you, That even Solomon in all his glory was not arrayed like one of these.

30. Wherefore, if God so clothe the grass of the field, which to-day is, and to-morrow is cast into the oven, shall he not much more clothe you, O ye of little faith?

31. Therefore take no thought saying, What *shall we eat?* or, What *shall we drink?* or, Wherewithal shall we be clothed?

32. (For after all these things do the Gentiles seek); for your heavenly Father knoweth that ye have need of all these things.

33. *But seek ye first the kingdom of God, and* his righteousness; and all these things shall be added unto you.

34. Take therefore no thought for the morrow; for the morrow shall shall take thought for the things of itself. Sufficient unto the day is the evil thereof.

GOLDEN TEXT.

Casting all your care upon him, for he careth for you.—1 Pet, 5 : 7.

CENTRAL TRUTH.

The Lord takes care of his people.

NOTES.—MAMMON was not the name of any person or idol, but means simply "riches." In figurative language riches were personified, as in our lesson. FOWLS.—Palestine abounds in birds of various kinds. No less than three hundred and twenty-two varieties have been found there, among them our titmouse, sparrow, wren, thrush, blackbird, swallow, robin, and the lark and nightingale, besides the raven, hawk, owl, etc. LILIES OF THE FIELD.—No particular variety is referred to here, there being many different kinds there. In Galilee one very brilliant red or purple lily is especially prevalent, growing several feet high, with a woody stem, which is gathered often with other shrubs and grasses for fuel (v. 30). SPIN.—Spinning in ancient times was not much different from that of more recent days. It was the occupation of women, who thus manufactured most of the material for clothing (Prov. 31 : 13, 19, 22, 24). SOLOMON, "peaceful," youngest son of David and Bathsheba (1 Chron. 3 : 5; 2 Sam. 11 : 3); succeeded his father as king of Israel (1 Kings 2 : 11, 12); built the temple at Jerusalem; renowned for wisdom and splendor. He reigned forty years. OVEN.—Those here meant were portable, made of clay, in the shape of a jar, wider at the bottom than at the top, and about three feet high. They were used for baking and roasting.

EXPLANATIONS.

LESSON TOPICS.—(I.) WORLDLY ANXIETY FORBIDDEN. (II.) WORLDLY ANXIETY NEEDLESS. (III.) ONE THING NEEDFUL.

I. WORLDLY ANXIETY FORBIDDEN. (24-25.) SERVE, in the sense of being bound to, belonging to; TWO MASTERS, at the same time; HATE THE ONE, while obliged to serve him; HOLD TO THE ONE, cleave to him whom he serves; DESPISE THE OTHER, and not serve him; MAMMON, see Notes: TAKE NO THOUGHT, literally, "be not distracted" in your thoughts, be not anxious; MORE, greater, of more importance; MEAT, food that sustains life; if God has given life, he will not withhold what sustains it; RAIMENT, clothing.

II. WORLDLY ANXIETY NEEDLESS (26-30.) FOWLS, see Notes; AIR, "the sky," through which the fowls fly; SOW . . REAP . . GATHER, toilsome occupations of man; BARNS, called "garner" in 3 : 12; buildings for the storage of grain; BETTER, because made in God's image, the highest of his creatures and his children in Christ; CUBIT, about eighteen inches; STATURE, better "span of life" or "age;" CONSIDER, "study;" LILIES, see Notes; TOIL NOT, in gathering materials; SPIN (see Notes), to make the material into raiment; SOLOMON, see Notes; GLORY, pomp and splendor; LIKE, as wonderfully and beautifully; GRASS, of which the lilies form a part; TO-DAY IS, living and growing, and the next day is cut down, dried and used for fuel; OVEN, see Notes; MUCH MORE . . YOU, who are destined for eternal life; OF LITTLE FAITH, because you act as if doubting it.

III. ONE THING NEEDFUL. (31-34.) ALL THESE THINGS, the satisfaction of bodily appetites and wants; GENTILES, "nations," all not Jews, heathen; KNOWETH, and will therefore supply your need; SEEK YE FIRST, not first in time only, but as first and greatest in importance; the great object of life; KINGDOM OF GOD, the condition in which his will is freely done; RIGHTEOUSNESS, that which has been explained in all the preceding; true spiritual purity; ADDED, supplied over and above; SHALL TAKE THOUGHT, "will have, or bring, cares" of its own; THE THINGS OF should be omitted; EVIL THEREOF, the troubles, etc., belonging to itself.

FRANK ANDREWS AND HIS PONY.

Frank sent his pony to Warren, Penn., to spend the winter. He placed him in the care of Jerry, an old attache of the family. Jerry regarded Billy as a very unmanageable animal, as he could not catch him when he was loose in the lot, and he required assistance to get him into the stable. Jerry could not understand who such an unruly and hard-to-be-governed horse should be kept for the use of a little boy.

Spring came, and Frank arrived in Warren, and you may imagine Jerry's surprise, when he saw Frank run up to Billy in his pasture, throw his arms around the pony's legs, and cover them with kisses. Billy seemed to enjoy Frank's carresses. He submitted to the bridle, and, in the presence of his young master, docility marked his every movement. He appeared to delight in submitting to Frank's wishes and demands.

Jerry and others were astonished at the new behavior of this hitherto incorrigible little horse. The cause was soon manifest. Frank was both kind and considerate; he never struck Billy, and he never rode him upon fatiguing journeys. By men, Billy had been whipped, had been pushed beyond his natural gait, and had been compelled to go long distances. Heavy weights were put upon his back; hence he dreaded them, and made every effort to escape from them. What a lesson Frank and Billy furnished? It is the key to the whole treatment of dumb animals by those who have them in their care. By kindness they will love you, and cheerfully serve you. When abused, they give you an unwilling service, and will avoid you whenever an opportunity offers. —*Cor. "Our Dumb Animals."*

A MAN THAT WAS NOT TO BE BOUGHT.

BY THE REV. J. G. HALL.

Six or eight years since, in one of the towns of Eastern Massachusetts, there was a Mr. D., a livery-stable keeper, about whom I once had the opportunity of learning the following fact. Among his many other good habits, one was never to suffer his own feet or his horses' feet to tread profanely on the Sabbath day. The illustrative fact referred to was this:

On a certain Sabbath morning three gentlemen from Boston, putting up with their wives at the village hotel, said to their host that they would go to Mr. D. and get three single-horse buggies, and take each his wife and go to the camp-meeting, about six miles off.

"It will be of no use," said the host, "for Mr. D. never lets his horse on the Sabbath."

"I never saw the man yet that money wouldn't buy," rejoined one of the party.

So they went and rang the bell at Mr. D.'s door. Mr. D. himself answered the call, and invited them in; to whom he said, after they had made known their errand,

"Gentlemen, I should be glad too accommodate you, but it is against my principles to let my horses go for hire on the Sabbath day."

"How much do you usually have a day for your single horses?" asked the gentleman who was the chief speaker.

"Two dollars and a half a day usually sir," answered Mr. D.

"Well, then," returned the gentleman, "here are three five dollar bills; please take them and let your man harness the horses, and we will go away very quitely and will return just after dusk, and without noise."

"Gentlemen," said Mr. D., I can only repeat what I have already said, that it is against my principles to hire out my horses on God's day, and I must persist in declining your very liberal offer."

At this the chief speaker on the other side stepped up closer to the sturdy Sabbath-keeper and, slipping into his hand a bright-looking bill, said to him,

"There, Mr. D., take that, and let your man quietly harness the horses for us."

The tempted one, looking down at what was thrust into his hand, saw that it was a new one-hundred-dollar bill on a Boston bank, a glittering prize; but without hesitating a moment and evidently without any inward struggle with the spirit of greed, he calmly but emphatically said,

"Gentlemen, my principles in this matter are fixed, and should you bring me all the money in the city of Boston it would not alter them. If you would like to attend worship our bell is now ringing, and I should be most happy to show you a seat, but I cannot let my horses go on the Sabbath," and he handed back the bill.

As the baffled temper took the rejected money he also looked at Mr. D. admiringly in the face, and stretching out his hand toward him, said,

"I want to shake hands with you, Mr. D.; I have sometimes heard of such men as you are, but I never saw one before."

Likewise said they all, and each of the other two shook hands with him, expressing also their pleasure, and adding that before they returned to Boston they would like a supply of his cards that they might know whom to direct their friends and acquaintances to as they visited the village. And as the secular week opened all these gentlemen returned repeatedly to Mr. D.'s stable to obtain horses and carriages for their pleasure, thus testifying in the most express manner their approbation of his conscientious and unswerving conduct. And so will it be *in all ordinary cases where Christians are* punctilious in matters of professed principle, scrupulous on points of worldly conformity, high-minded, resolute, and incorruptible on all questions of duty.

To be not only true to ourselves but also useful to others are among the reasons for which God has called us to his kingdom and glory. As says our chief English poet,

"Heaven doth with us, as we with torches do,
Not light them for themselves; for if our virtues
Did not go forth of us, 'twere all alike
As if we had them not."

Or, as says the greatest One of all, "No man lighteth a candle and putteth it under a bushel, but on a candlestick, that it may give light to all that are in the house."—*Illustrated Christian Weekly.*

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